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ABSTRACT

The number of doctorate recipients in 1974 was 33,000, a 2.2 percent decrease from the number receiving the degree in 1973. A number of variables are used in analyzing the doctorates granted including major field, sex, postgraduation plans, sources of support in graduate school, state of doctoral institution, racial or ethnic group and U.S. citizenship status. (JMF)

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Summary Report 1974 DOCTORATE RECIPIENTS FROM UNITED STATES UNIVERSITIES

Prepared in the
Board on Human-Resource
Data and Analyses
Commission on Human Resources
National Research Council

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EDUCATION & WELFARE
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National Academy of Sciences
Washington, D.C.
June 1975

FOREWORD

This report presents a brief summary of data gathered from the Survey of Earned Doctorates during fiscal year 1974. The Survey is conducted annually by the Board on Human-Resource Data and Analyses (BHRDA) of the Commission on Human Resources (CHR) of the National Research Council. Questionnaire forms, distributed with the cooperation of the Graduate Deans, are filled out by the graduates as they complete all requirements for their doctoral degrees. The data in this report refer to doctorates earned during the period July 1, 1973 to June 30, 1974, but they do not include professional degrees such as the MD, DDS, and DVM.

This is the eighth in a series of yearly summaries of data from the Survey of Earned Doctorates, a series that began in 1967. The BHRDA publishes data gathered during a given fiscal year in the following fiscal year. Trend data from an earlier period can be found in the book, *Doctorate Recipients from United States Universities 1958-1966* (NAS publication, 1489). A comparable report is being prepared for the period 1967-1975. This book will also include selected trend data on doctorates for the past century.

The distribution of the Survey of Earned Doctorates questionnaire, the maintenance of the resulting data file, and the publication of this report are supported jointly by the National Science Foundation, the United States Office of Education, the National Institutes of Health, and the National Endowment for the Humanities. The BHRDA wishes to express its appreciation to these agencies for their assistance.

The CHR is concerned with those activities of the National Research Council that contribute to the more effective development and utilization of the nation's human resources. Its programs seek to strengthen higher education and develop better understanding of the educational process. It is hoped that prompt reporting of the present data to educational, governmental, and professional agencies will facilitate planning in higher education. Suggestions for improvement of the content or format of the report and questions or comments will be welcomed. Such communications may be directed to the Board on Human-Resource Data and Analyses, National Research Council, 2101 Constitution Avenue, Washington, D. C. 20418.

DOCTORATE PRODUCTION DECREASES FOR THE FIRST TIME SINCE 1957

The number of doctorate recipients in 1974 was 33,000, a 2.2% decrease from the number receiving the degree in 1973 and almost exactly the same as the number of doctorate recipients in 1972 which was 33,001. Although the total number of degree recipients in 1972 and in 1974 are essentially equal the proportion of women doctorates increased from 16.0% of the total in 1972 to 19.4% in 1974 with a corresponding decrease in the proportion of men.

The table below and Figure 1 show the differences in trends in major field for men and women for the period 1966-1974. The social sciences field is the only major field for which there was an increase in the number of male doctoral recipients in 1974.* The drop in male doctorates in the physical sciences has been particularly acute with a 16.2% decrease from 5,390 in the peak year, 1971, to 4,517 in 1974.

During the period 1966-1974 the number of women doctorates has tripled. Most of the growth has been in three fields: education, arts and humanities, and social sciences which account for 80% (3,480) of the increase in women doctorates. These fields continued to grow in 1974 but the other four fields: life sciences, physical sciences, professional fields, and engineering which have had much smaller growth in numbers of women doctorates decreased in 1974.

U. S. DOCTORATES GRANTED BY MAJOR FIELD AND SEX, 1966-1974

Year	Total	MALES						
		Physical Sciences	Engineering	Life Sciences	Social Sciences	Arts & Human.	Prof. Fields	Education
1966	15,863	3,647	2,291	2,542	2,241	2,020	636	2,462
1967	17,944	4,123	2,594	2,726	2,654	2,310	724	2,790
1968	19,985	4,405	2,835	3,186	2,939	2,491	829	3,223
1969	22,338	4,713	3,239	3,552	3,302	2,727	880	3,739
1970	25,508	5,302	3,417	3,986	3,830	3,088	1,059	4,667
1971	27,187	5,390	3,479	4,337	4,239	3,306	1,227	5,061
1972	27,719	5,142	3,454	4,253	4,541	3,430	1,322	5,435
1973	27,645	4,862	3,293	4,197	4,668	3,817	1,261	5,464
1974	26,585	4,517	3,110	4,031	4,724	3,606	1,226	5,322

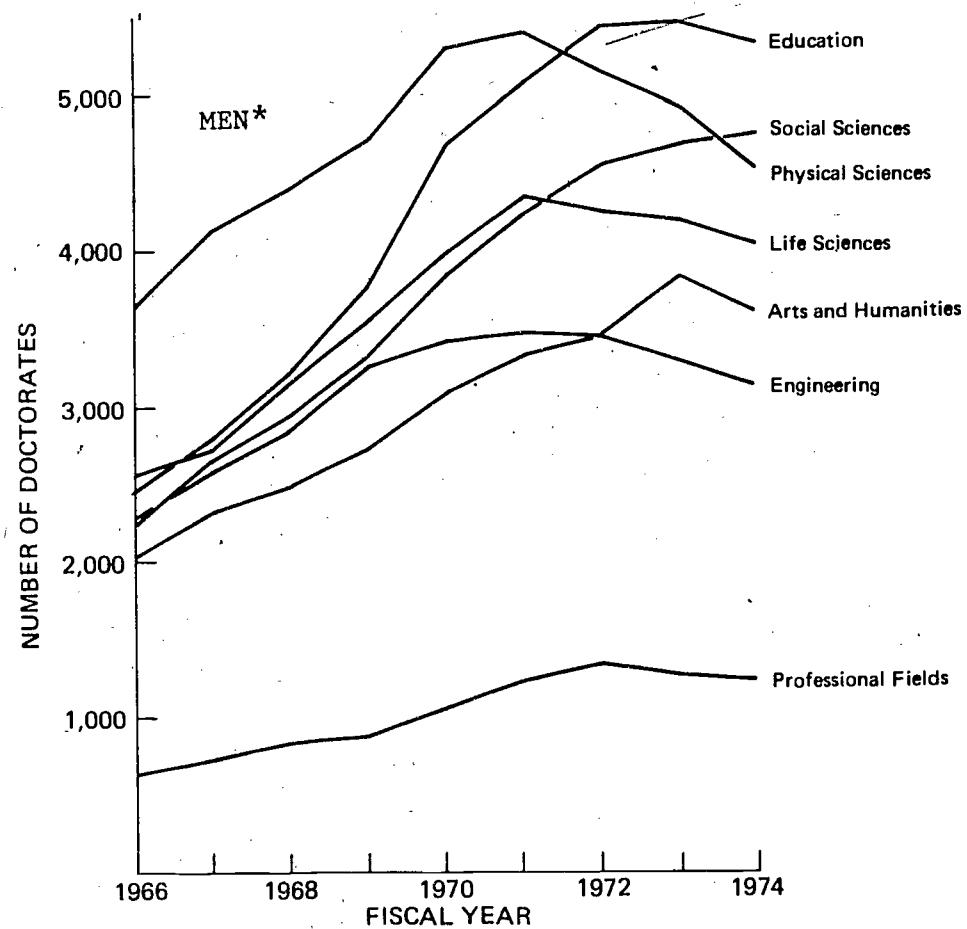
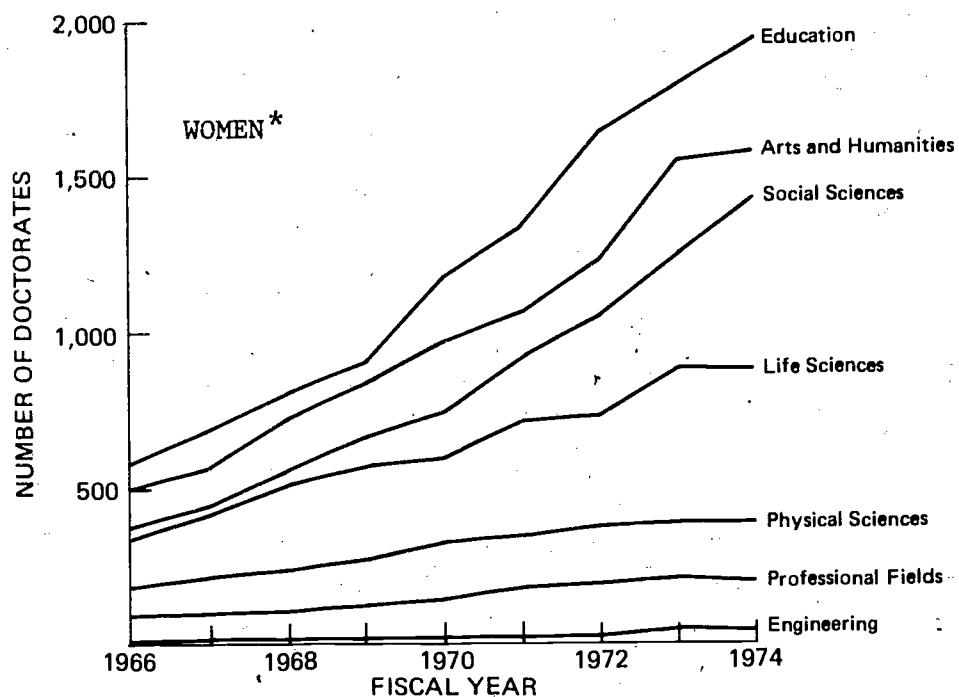
		FEMALES						
		Physical Sciences	Engineering	Life Sciences	Social Sciences	Arts & Human.	Prof. Fields	Education
1966	2,090	180	8	345	378	500	98	581
1967	2,440	209	9	418	448	561	101	688
1968	2,931	232	12	510	551	719	101	801
1969	3,386	261	10	567	659	837	126	901
1970	3,967	320	15	588	738	970	142	1,184
1971	4,585	340	16	714	916	1,060	175	1,342
1972	5,282	365	21	731	1,049	1,271	184	1,644
1973	6,082	376	45	871	1,243	1,547	200	1,784
1974	6,415	375	34	863	1,432	1,568	195	1,939

POSTGRADUATION PLANS: DOCTORATES SEEKING EMPLOYMENT OR POST-DOCTORAL STUDY

Figures 2-7 present data from Tables 2, 2a and 5 which have not previously been included in the summary report. Figure 2 shows, by summary field, the difference between the proportion of doctorates in 1973 and 1974 who indicated on question "S" on the survey form

*See note on page 11 re estimation procedures used for this report.

FIGURE 1 Number of United States Doctorates by Major Field, 1966-1974



*Note that the vertical scale used for the chart for women is larger than that in the chart for men.

(see p. 25) that their postgraduation plans were employment, military service, or other (specify) and that they were still seeking employment as indicated by question "R" where they checked an item other than "have signed contract or made definite commitment." For the total doctorates there was an increase of 1.0%, from 18.9% in 1973 to 19.9% in 1974, in the proportion who did not have a definite employment commitment at the time the survey form was completed. This is a small change as a proportion of the total doctorates but it is approximately a five percent increase from 1973 to 1974 in the number of doctorates who were still seeking employment when surveyed. Although there was a small decrease of slightly less than one percent in the proportion of doctorates still seeking employment in the physical sciences, engineering and life sciences this was more than compensated for by the increase of one to two percent in the other fields.

The differences among racial and ethnic groups in the proportions still seeking employment when surveyed are shown in Figure 3. These differences are important but it is desirable to consider them in conjunction with the percentage that originally planned on employment. Although American Indians and Blacks have the highest proportions still seeking employment they also have high proportions who have found employment. The Orientals on the other hand had only 63.3% planning on employment so the 21.9% still seeking employment represents a third of those planning on employment. The citizenship status of individuals also affects employment plans and Table 2 shows considerable variability in citizenship status among the racial and ethnic groups.

Figure 4 shows that the proportion of women still seeking employment is higher than the corresponding proportion of male doctorates for all summary fields. For the total for all fields for women the proportion seeking employment is 26.0% compared with 18.4% for men.

FIGURE 2 Postgraduation Plans

Total Doctorates who were seeking Employment but did not have a Signed Contract or had not made a Definite Commitment when Surveyed, 1973 and 1974

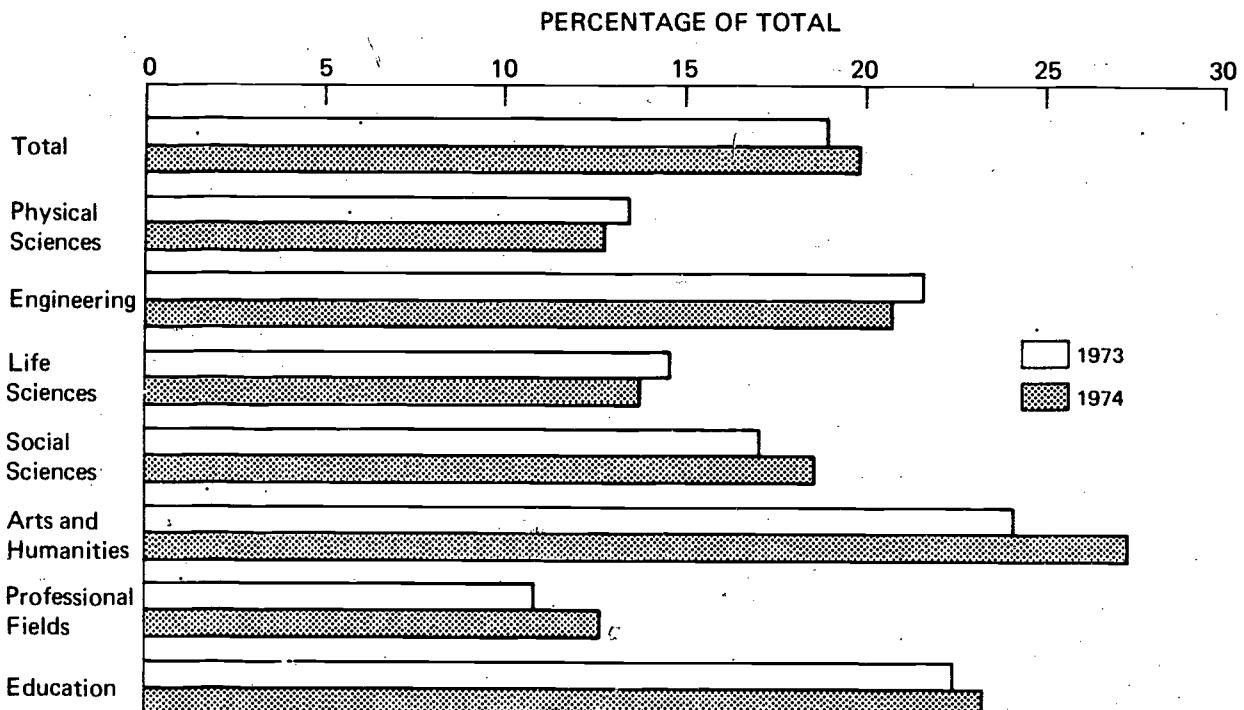
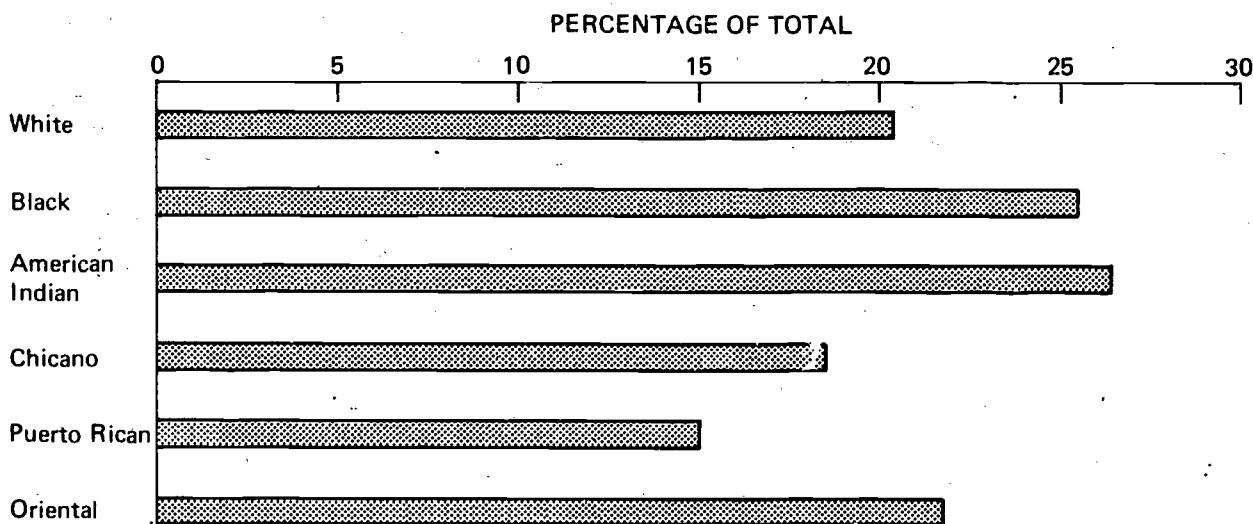


FIGURE 3 Postgraduation Plans

Doctorates who were seeking Employment but did not have a Signed Contract or had not made a Definite Commitment when Surveyed, by Racial or Ethnic Group, 1974.

**FIGURE 4 Postgraduation Plans**

Doctorates who were seeking Employment but did not have a Signed Contract or had not made a Definite Commitment when Surveyed, by Sex, 1974

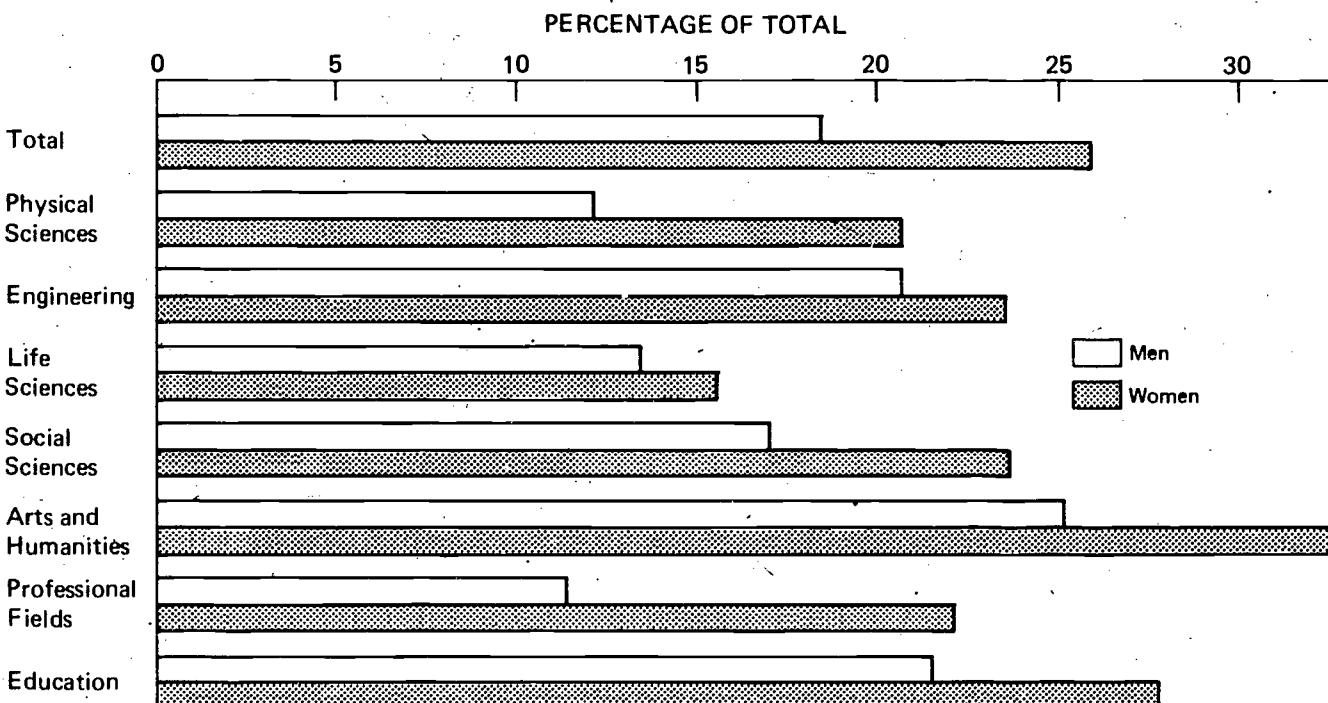


Figure 5 shows that 4.4% of the doctorates, or 1,464 individuals, were still seeking postdoctoral study at the time the survey form was completed while from Table 2 it can be seen that 10.5% or 3,462 had found definite postdoctoral employment. There was little change from 1973 to 1974 in the proportion of doctorates still seeking postdoctoral study when the forms were completed. On the other hand, there was a large variability among fields in 1974. In the physical sciences and life sciences, 11.3% and 9.1% respectively, of the doctorates in the field were still seeking postdoctorals whereas in other fields the percentages range from 0.8% to 5.3%. From Table 2 it can be seen that the physical science and life science fields account for 70% of the doctorates planning on postdoctoral study.

In drawing inferences from Figure 6, as with Figure 3, it is important to consider the citizenship status of the racial or ethnic group and the proportion of the group that was originally planning on postdoctoral study. For example, if the widely different proportions of Blacks (3.2%), American Indians (3.9%), and Orientals (13.9%) still seeking postdoctorals are expressed as percentages of the group proportions planning on postdoctorals it can be seen that 40.5%, 41.9%, and 42.4%, respectively, of those originally planning on further study are still seeking it.

As shown in Figure 7 there is little difference between the proportions of men and women doctorates still seeking postdoctoral study. In all fields except engineering there is a larger proportion of women than men seeking postdoctoral study with the largest differences occurring in the physical science and life science fields.

FIGURE 5 Postgraduation Plans

Total Doctorates who were seeking a Postdoctoral Fellowship, Associateship or Traineeship but did not have a Definite Commitment when Surveyed, 1973 and 1974

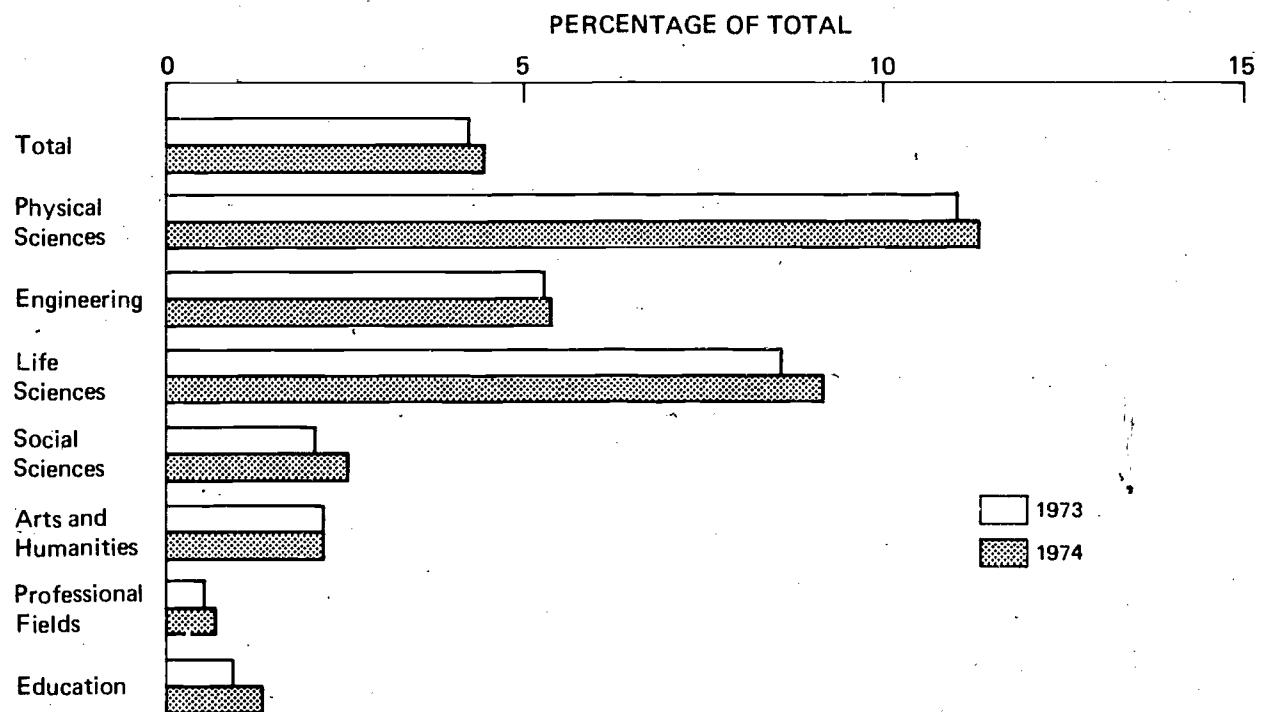
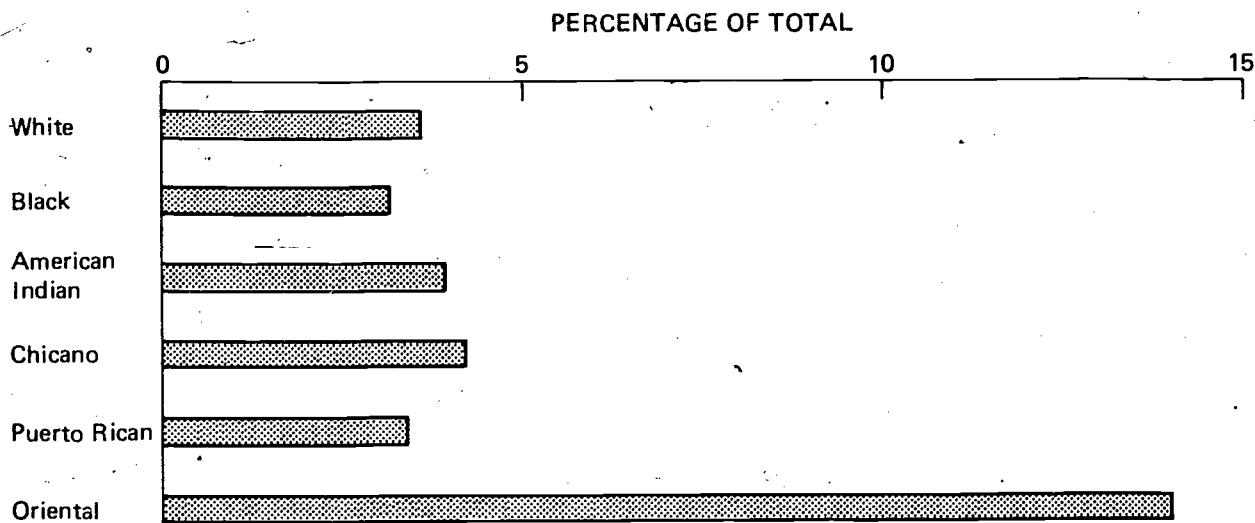
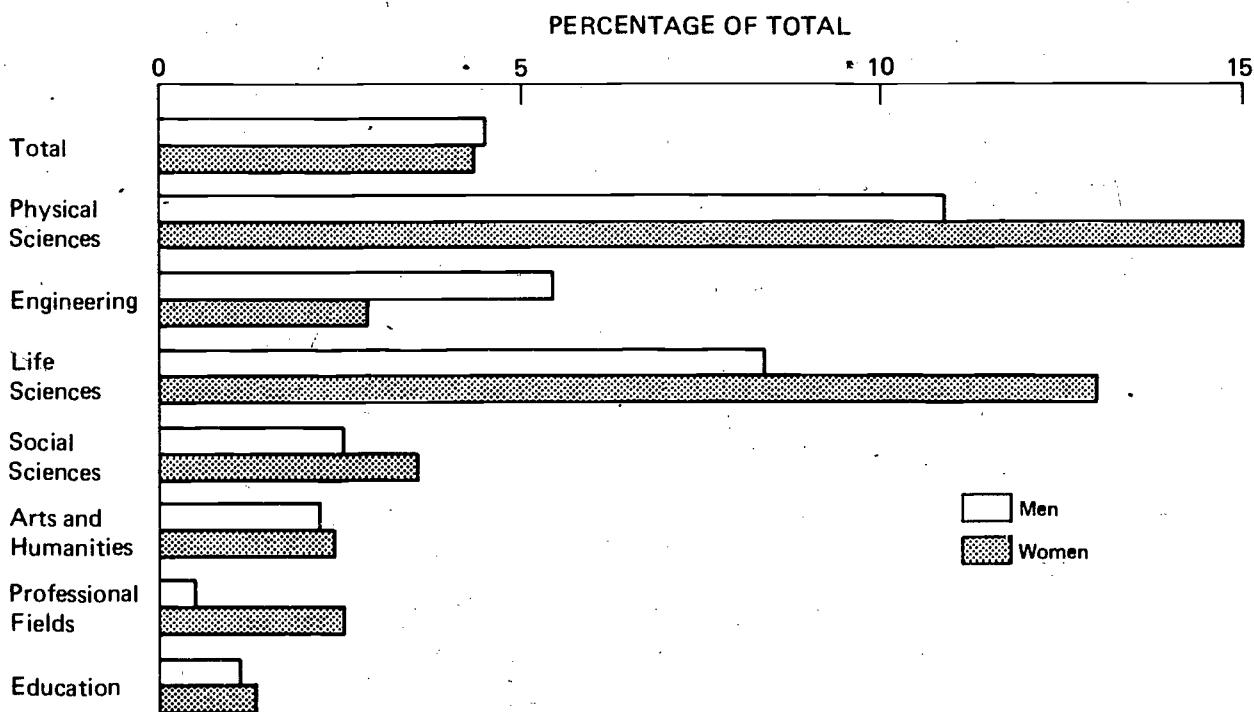


FIGURE 6 Postgraduation Plans

Doctorates who were seeking a Postdoctoral Fellowship, Associateship or Traineeship but did not have a Definite Commitment when Surveyed, by Racial or Ethnic Group, 1974

**FIGURE 7 Postgraduation Plans**

Doctorates who were seeking a Postdoctoral Fellowship, Associateship or Traineeship but did not have a Definite Commitment when Surveyed, by Sex, 1974



EXPLANATION OF FIVE BASIC TABLES

TABLE 1	Number of Doctorate Recipients by Sex and Subfields, FY 1974
TABLE 2	Statistical Profile of All Doctorate Recipients and Women Doctorate Recipients by Field of Doctorate, FY 1974 (two tables)
TABLE 2a	New data items for Statistical Profile of All Doctorate Recipients and Women Doctorate Recipients by Field of Doctorate, FY 1973 (two tables)
TABLE 3	Percentage of FY 1974 Doctorate Recipients by Sources of Support in Graduate School, by Sex and Summary Fields
TABLE 4	Number of FY 1974 Doctorate Recipients by Sex, State of Doctoral Institution and Summary Field
TABLE 5	Statistical Profile of Doctorate Recipients by Racial or Ethnic Group and U.S. Citizenship Status, FY 1974

Table titles and headings are generally self-explanatory, but a few terms need special definition or explanation.

Table 2:

There are two 2-page tables; one presents data about all doctorate recipients of FY 1974 and the other contains data about women only. The fields of the doctorate which head Table 2 are the same as those in the 1972 and 1973 reports but differ from those in the *Summary Reports* for 1967-71. This table provides data by field and also by broader summary field. Refer to page 27 for the codes included in each broad field and the Specialties List on page 26 for the codes and names of each subfield.

“Median Age at Doctorate”—One-half received the doctorate at this age or younger.

“Percent with Master’s”—This indicates the percentage of doctorate recipients in a field who received a master’s degree in any field before taking the doctorate.

“Median Time Lapse”—*Total Time* refers to total calendar time elapsed between year of baccalaureate and year of doctorate; *Registered Time* refers to the total time registered in a university between baccalaureate and doctorate.

Postgraduation plans of the doctorate recipients are grouped as: *Postdoctoral study* (fellowship, research associateship, traineeship, other), *Employment* (educational institution, industry, etc.), or *Unknown*. The sum of the columns of percentages totals 100% with allowance for rounding. For example, 4.3% of all the engineers plan to go to postdoctoral fellowships, 7.0% to research associateships, 0.3% to traineeships, and 0.6% plan on some other form of postdoctoral study support; 80.9% plan on employment; and 7.0% did not indicate their postgraduation plans. The percentages listed by type of employer (educational institution, industry, etc.) total to the 80.9% planning on employment.

Four new lines of data are included in this report to distinguish between individuals who have definite postgraduation plans (item R: “Have signed contract or made definite commitment” in the survey questionnaire p. 25) and those who are still seeking employment or postdoctoral study (item R: negotiating, seeking, or other). These four lines when added to the prior line “status unknown” total 100%. The two lines for definite postdoctoral study and seeking postdoctoral study add to the total percentage planning study and the two lines for definite employment and seeking employment add to the total percentage planning employment.

Percentages showing the distribution of doctorate recipients by *work activity* and by *region of employment* are based only on those who have a definite employment commitment. They exclude those still seeking employment and those planning postdoctoral study as described in the categories above. These data differ from earlier Summary Reports which included all individuals planning on employment i.e. those seeking as well as those having definite employment.

Table 2a:

The four lines of new data in Table 2 for doctorates seeking and those having definite employment or postdoctoral plans and the data on *work activity* and *region of employment* for those having definite employment are provided for 1973 to give a basis for comparison.

Table 3:

Data in Table 3 describe sources of financial support during graduate school. The question was answered by 30,655 (93%) of the FY 1974 doctorate recipients. The data in the table should be interpreted as follows: 449 male doctorate recipients in the physical sciences reported financial support from NSF fellowships during graduate school. This number is 10.5% of the male physical science doctorates who answered the question, and it is 34.4% of the males in all fields that reported NSF fellowship support. Since students may indicate multiple sources of support, the vertical percentages sum to more than 100%.

Table 4:

Table 4 shows the *number of persons* receiving a doctorate from universities in each of the 50 states, District of Columbia and Puerto Rico.

Table 5:

The 1973 Summary Report was the first to include data for racial and ethnic groups. The tables in that report stimulated many questions for more detailed data by individual racial or ethnic group. This report provides such data in Table 5 which contains data by race or ethnic group and by U.S. citizenship status for selected variables from Tables 2, 3 and 4.

Comparisons between the 1973 data and the 1974 data are somewhat tenuous because of the large number of cases (8,592) for which racial or ethnic data were unavailable in 1973. For this reason 1973 data in Table 5 format have not been included in this report. For people who have a special interest in minority data Table 5 for 1973 is available on request.

ESTIMATION PROCEDURES

At the time data processing was done for the summary report the information available for 1,958 individuals, less than 6% of the total number, was incomplete. Since these individuals were not evenly distributed across fields and institutions, estimates for missing data were based on responses for individuals of the same sex in the same field and from the same institution for 1974 where data were available. When the 1974 data were not available, estimates were based on 1973 data for the appropriate sex, field and institution. The use of 1973 data could cause a small underestimate in measures of change from 1973 to 1974.

TABLE 1
NUMBER OF DOCTORATE RECIPIENTS, BY SUBFIELDS, FISCAL YEAR 1974*

SUBFIELD OF DOCTORATE	NUMBER OF DOCTORATES			SUBFIELD OF DOCTORATE	NUMBER OF DOCTORATES		
	MEN	WOMEN	TOTAL		MEN	WOMEN	TOTAL
TOTAL ALL FIELDS	26585	6415	33000				
PHYSICAL SCIENCES	4517	375	4892				
MATHEMATICS	1081	115	1196	CHEMICAL	396	8	404
ALGEBRA	105	19	124	CERAMIC	24	2	26
ANALYSIS	189	24	213	ELECTRICAL	598	3	601
GEOMETRY	35	3	38	ELECTRONICS	84		84
LOGIC	19	2	21	INDUSTRIAL	92	1	93
NUMBER THEORY	21	2	23	NUCLEAR ENGINEERING	111	1	112
PROBABILITY, MATH STATISTICS	138	12	150	ENGINEERING MECHANICS	159	2	161
TOPOLOGY	97	15	112	ENGINEERING PHYSICS	26	1	27
COMPUTING THEORY AND PRACTICE	180	14	194	MECHANICAL	372	3	375
OPERATIONS RESEARCH	24		24	METALLURGY AND PHYS MET ENG	140	1	141
APPLIED MATHEMATICS	133	5	138	OPERATIONS RESEARCH	124	1	125
MATHEMATICS, GENERAL	101	10	111	FUEL TECH, PETROL ENGR	19		19
MATHEMATICS, OTHER	39	9	48	SANITARY	34		34
PHYSICS AND ASTRONOMY	1277	57	1334	MINING ENGINEERING	3		3
ASTRONOMY	51	5	56	MATERIAL SCIENCE ENGINEERING	120	1	121
ASTROPHYSICS	76	1	77	ENGINEERING, GENERAL	44	1	45
ATOMIC AND MOLECULAR PHYSICS	116	4	120	ENGINEERING, OTHER	172	1	173
ELECTROMAGNETISM	8		8				
MECHANICS	5	1	6				
ACOUSTICS	11		11				
FLUIDS	21	1	22				
PLASMA PHYSICS	57		57				
OPTICS	25	1	26				
THERMAL PHYSICS	18		18				
ELEMENTARY PARTICLES	137	11	148				
NUCLEAR STRUCTURE	143	1	144				
SOLID STATE	332	19	351				
PHYSICS, GENERAL	153	9	162				
PHYSICS, OTHER	124	4	128				
CHEMISTRY	1618	174	1792				
ANALYTICAL	138	7	145				
INORGANIC	176	28	204				
ORGANIC	573	50	623				
NUCLEAR	30	2	32				
PHYSICAL	360	47	407				
THEORETICAL	47	8	55				
AGRICULTURAL AND FOOD	11	2	13				
PHARMACEUTICAL	56	6	62				
POLYMER CHEMISTRY	33	2	35				
CHEMISTRY, GENERAL	150	14	164				
CHEMISTRY, OTHER	44	8	52				
EARTH SCIENCES	541	29	570				
MINERALOGY, PETROLOGY	39	1	40				
GEOCHEMISTRY	44	4	48				
STRATIGR, SEDIMENTATION	47		47				
PALEONTOLOGY	35	4	39				
STRUCTURAL GEOLOGY	15		15				
GEOPHYSICS	78	4	82				
GEOMORPHOL, GLACIAL GEOLOGY	19	1	20				
HYDROLOGY	16	1	17				
OCEANOGRAPHY	73	8	81				
METEOROLOGY	58	2	60				
APPL GEOL, GEOL ENG, ECON GEOL	30		30				
FUEL TECHNOL, PETROL ENG	11	1	12				
EARTH SCIENCES, GENERAL	50	1	51				
EARTH SCIENCES, OTHER	26	2	28				
ENGINEERING	3110	34	3144				
AERONAUTICAL AND ASTRONAUTICAL	148	3	151				
AGRICULTURAL	56		56				
BIOMECHANICAL ENGINEERING	60	1	61				
CIVIL	328	4	332				
				ENVIRONMENTAL SCIENCES	96	8	104

*See note on page 11 re estimation procedures for this report.

SUBFIELD OF DOCTORATE	NUMBER OF DOCTORATES			SUBFIELD OF DOCTORATE	NUMBER OF DOCTORATES		
	MEN	WOMEN	TOTAL		MEN	WOMEN	TOTAL
SOCIAL SCIENCES (INCL PSYCH)	6724	1432	8156	EDUCATION	5322	1939	7261
ANTHROPOLOGY	256	125	381	FOUNDATIONS, SOCIAL, PHILOS	209	74	283
COMMUNICATIONS	218	65	283	EDUCATIONAL PSYCHOLOGY	311	171	482
SOCIOLOGY	461	184	645	ELEMENTARY EDUCATION, GENERAL	137	152	289
ECONOMICS	760	73	833	SECONDARY EDUCATION, GENERAL	160	47	207
ECONOMETRICS	19	1	20	HIGHER EDUCATION	464	113	577
STATISTICS	34	2	36	ADULT EDUC AND EXTENSION EDUC	132	28	160
GEOGRAPHY	183	14	197	EDUCATIONAL MEAS AND STATISTICS	69	27	96
AREA STUDIES	25	9	34	CURRICULUM AND INSTRUCTION	510	260	770
POLITICAL SCIENCE, PUBLIC ADMIN	660	115	775	EDUCATIONAL ADMIN AND SUPERVISION	1239	162	1401
INTERNATIONAL RELATIONS	124	8	132	GUIDANCE, COUNS, STUDENT PERSONNEL	462	191	653
URBAN AND REG PLANNING	66	5	71	SPECIAL EDUC, GIFTED, HANDICAPPED, ETC	172	107	279
SOCIAL SCIENCES, GENERAL	25	9	34	AUDIO-VISUAL MEDIA	67	15	82
SOCIAL SCIENCES, OTHER	97	31	128	AGRICULTURE	26		26
PSYCHOLOGY	1796	791	2587	ART	39	18	57
CLINICAL	529	222	751	BUSINESS	54	29	83
COUNSELING AND GUIDANCE	144	64	208	ENGLISH	56	36	92
DEVELOP AND GERONTOLOGY	87	84	171	FOREIGN LANGUAGE	19	11	30
EDUCATIONAL	85	39	124	HOME ECONOMICS	3	31	34
SCHOOL PSYCHOLOGY	53	39	92	INDUSTRIAL ARTS	55	2	57
EXPERIMENTAL	271	89	360	MATHEMATICS	86	24	110
COMPARATIVE	23	6	29	MUSIC	103	20	123
PHYSIOLOGICAL	82	38	120	PHYS ED, HEALTH, AND REC	249	106	355
INDUSTRIAL AND PERSONNEL	76	7	83	SCIENCE EDUCATION	111	28	139
PERSONALITY	44	15	59	SOCIAL SCIENCE EDUCATION	56	11	67
PSYCHOMETRICS	18	9	27	VOCATIONAL EDUCATION	167	23	190
SOCIAL	145	62	207	OTHER TEACHING FIELDS	75	86	161
PSYCHOLOGY, GENERAL	155	60	215	EDUCATION, GENERAL	212	108	320
PSYCHOLOGY, OTHER	84	57	141	EDUCATION, OTHER	79	59	138
ARTS AND HUMANITIES	3606	1568	5174	OTHER AND UNSPECIFIED	42	2	58
ART, FINE AND APPLIED	3	1	4				
ART, HISTORY AND CRITICISM	70	55	125				
HISTORY, AMERICAN	352	80	432				
HISTORY, EUROPEAN	259	65	324				
HISTORY, GENERAL AND OTHER	329	66	395				
HISTORY AND PHILOSOPHY OF SCIENCE	23	9	32				
MUSIC	306	72	380				
SPEECH AS A DRAMATIC ART	111	32	143				
ARCHEOLOGY	11	9	20				
RELIGION	163	15	178				
PHILOSOPHY	354	65	419				
LINGUISTICS	99	68	167				
AMERICAN LANG AND LIT	169	86	255				
ENGLISH LANG AND LIT	687	425	1112				
GERMAN LANG AND LIT	94	76	170				
RUSSIAN LANG AND LIT	39	23	62				
FRENCH LANG AND LIT	107	164	271				
SPANISH AND PORTUGUESE LANG AND LIT	145	88	233				
ITALIAN LANG AND LIT	13	13	26				
CLASSICAL LANG AND LIT	55	33	88				
ALL OTHER MODERN LANGUAGES	92	32	124				
ARTS AND HUMANITIES, GENERAL	14	10	24				
ARTS AND HUMANITIES, OTHER	109	81	190				
PROFESSIONAL FIELDS	1226	195	1421				
THEOLOGY	166	14	180				
BUSINESS ADMINISTRATION	754	35	789				
HOME ECONOMICS	7	36	43				
JOURNALISM	21	1	22				
SPEECH AND HEARING SCIENCES	90	40	130				
LAW, JURISPRUDENCE	23	1	24				
SOCIAL WORK	80	35	115				
LIBRARY AND ARCHIVAL SCIENCE	34	22	56	SOURCE: NRC, Commission on Human Resources, Doctorate Records File			
PROFESSIONAL FIELDS, OTHER	51	11	62				

NSF Form 550 1972
OMB No. 99-R0054
Approval Expires June 30, 1974

SURVEY OF EARNED DOCTORATES

This form is to be returned to the GRADUATE DEAN, for forwarding to Manpower Studies Branch, Office of Scientific Personnel, National Research Council, 2101 Constitution Avenue, Washington, D.C. 20418

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8-20 TA

Please print or type.

A. Name in full: (Last Name) (First Name) (Middle Name) (7-28)

B. U.S. Social Security Number: CR () Cross Reference:
(30-38) Maiden name or former name legally changed

C. Permanent address through which you could always be reached: (Care of, if applicable)

..... (Number) (Street) (City)

..... (State) (Zip Code) (Or Country if not U.S.)

D. Date of birth: (Month) (Day) (Year) Place of birth: (State) (Or Country if not U.S.) (44-45)

E. Sex: 1 Male 2 Female (46)

F. Marital status: 1 Married 2 Not married (including widowed, divorced) (47)

G. Citizenship: 0 U.S. native 2 Non-U.S., Immigrant (Permanent Resident)
1 U.S. naturalized 3 Non-U.S., Non-Immigrant (Temporary Resident) (48)

If Non-U.S., indicate country of present citizenship (49-50)

H. Racial or ethnic group: (Check all that apply.) 0 White/Caucasian 1 Black/Negro/Afro-American
2 American Indian 3 Spanish-American/Mexican-American/Chicano
4 Puerto Rican-American 5 Oriental 6 Other, specify (51-53)

I. High school last attended: (School Name) (City) (State) (54-55)

Year of graduation from high school: (56-57)

J. List in the table below all collegiate and graduate institutions you have attended including 2-year colleges. List chronologically, and include your doctoral institution as the last entry.

Institution Name	Location	Years Attended		Major Field			Minor Field	Degree (if any)		
		From	To	Name	Number	Number		Title of Degree	Granted Mo.	Yr.

K. Enter below the title of your doctoral dissertation and the most appropriate classification number and field. If a project report or a musical or literary composition (not a dissertation) is a degree requirement, please check box. 48

Title Classify using Specialties List
..... Number Name of field (62-64)

L. Name the department (or interdisciplinary committee, center, institute, etc.) and school or college of the university which supervised your doctoral program: (Department) (School) (65-80)

M. Name of your dissertation adviser: (please print) (Last Name) (First Name) (Middle Initial) (8-20)

continued on next page

MATHEMATICS

- 000 — Algebra
- 010 — Analysis & Functional Analysis
- 020 — Geometry
- 030 — Logic
- 040 — Number Theory
- 050 — Probability, Math. Statistics
(see also 544, 670, 725, 727, 920)
- 060 — Topology
- 080 — Computing Theory & Practice
- 082 — Operations Research (see also 478)
- 085 — Applied Mathematics
- 098 — Mathematics, General
- 099 — Mathematics, Other*

ASTRONOMY

- 101 — Astronomy
- 102 — Astrophysics

PHYSICS

- 110 — Atomic & Molecular Physics
- 120 — Electromagnetism
- 130 — Mechanics
- 132 — Acoustics
- 134 — Fluids
- 135 — Plasma Physics
- 136 — Optics
- 138 — Thermal Physics
- 140 — Elementary Particles
- 150 — Nuclear Structure
- 160 — Solid State
- 198 — Physics, General
- 199 — Physics, Other*

CHEMISTRY

- 200 — Analytical
- 210 — Inorganic
- 220 — Organic
- 230 — Nuclear
- 240 — Physical
- 250 — Theoretical
- 260 — Agricultural & Food
- 270 — Pharmaceutical
- 275 — Polymer Chemistry
- 298 — Chemistry, General
- 299 — Chemistry, Other*

EARTH SCIENCES

- 301 — Mineralogy, Petrology
- 305 — Geochemistry
- 310 — Stratigraphy, Sedimentation
- 320 — Paleontology
- 330 — Structural Geology
- 340 — Geophysics (Solid Earth & Atmospheric)
- 350 — Geomorph., Glacial Geology
- 360 — Hydrology
- 370 — Oceanography
- 380 — Meteorology
- 391 — Applied Geol., Geol. Engr., Econ. Geol.
- 395 — Fuel Tech., Petrol. Engr. (see also 479)
- 398 — Earth Sciences, General
- 399 — Earth Sciences, Other*

ENGINEERING

- 400 — Aeronautical & Astronautical
- 410 — Agricultural
- 415 — Biomedical Engineering
- 420 — Civil
- 430 — Chemical
- 435 — Ceramic
- 440 — Electrical
- 445 — Electronics
- 450 — Industrial
- 455 — Nuclear Engineering
- 460 — Engineering Mechanics
- 465 — Engineering Physics
- 470 — Mechanical
- 475 — Metallurgy & Phys. Met. Engr.
- 478 — Operations Research (see also 082)

- 479 — Fuel Tech., Petrol. Engr. (see also 395)
- 480 — Sanitary
- 486 — Mining
- 497 — Materials Science Engr.
- 498 — Engineering, General
- 499 — Engineering, Other*

ENVIRONMENTAL SCIENCES

- 589 — Environmental Sciences*

AGRICULTURAL SCIENCES

- 500 — Agronomy
- 501 — Agricultural Economics
- 502 — Animal Husbandry
- 503 — Food Science & Technology
- 504 — Fish & Wildlife
- 505 — Forestry
- 506 — Horticulture
- 507 — Soils & Soil Science
- 510 — Animal Sciences
- 511 — Phytopathology
- 518 — Agriculture, General
- 519 — Agriculture, Other*

MEDICAL SCIENCES

- 520 — Medicine & Surgery
- 522 — Public Health
- 523 — Veterinary Medicine
- 524 — Hospital Administration
- 527 — Parasitology
- 534 — Pathology
- 536 — Pharmacology
- 537 — Pharmacy
- 538 — Medical Sciences, General
- 539 — Medical Sciences, Other*

BIOLOGICAL SCIENCES

- 540 — Biochemistry
- 542 — Biophysics
- 544 — Biometrics, Biostatistics
(see also 050, 370, 725, 727, 920)
- 545 — Anatomy
- 546 — Cytology
- 547 — Embryology
- 548 — Immunology
- 550 — Botany
- 560 — Ecology
- 562 — Hydrobiology
- 564 — Microbiology & Bacteriology
- 566 — Physiology, Animal
- 567 — Physiology, Plant
- 569 — Zoology
- 570 — Genetics
- 571 — Entomology
- 572 — Molecular Biology
- 578 — Biological Sciences, General
- 579 — Biological Sciences, Other*

PSYCHOLOGY

- 600 — Clinical
- 610 — Counseling & Guidance
- 620 — Developmental & Gerontological
- 630 — Educational
- 635 — School Psychology
- 641 — Experimental
- 642 — Comparative
- 643 — Physiological
- 650 — Industrial & Personnel
- 660 — Personality
- 670 — Psychometrics
(see also 050, 544, 725, 727, 920)
- 680 — Social
- 698 — Psychology, General
- 699 — Psychology, Other*

SOCIAL SCIENCES

- 700 — Anthropology
- 708 — Communications*
- 710 — Sociology
- 720 — Economics (see also 501)
- 725 — Econometrics
(see also 050, 544, 670, 727, 920)

- 727 — Statistics
(see also 050, 544, 670, 725, 920)
- 740 — Geography
- 745 — Area Studies*
- 750 — Political Science, Public Admin.
- 755 — International Relations
- 770 — Urban & Reg. Planning
- 798 — Social Sciences, General
- 799 — Social Sciences, Other*

ARTS & HUMANITIES

- 801 — Art, Applied
- 802 — Art, History & Criticism
- 804 — History, American
- 805 — History, European
- 806 — History, Other*
- 807 — History & Philosophy of Science
- 830 — Music
- 831 — Speech as a Dramatic Art
(see also 885)
- 832 — Archeology
- 833 — Religion (see also 881)
- 834 — Philosophy
- 835 — Linguistics
- 878 — Arts & Humanities, General
- 879 — Arts & Humanities, Other*

LANGUAGES & LITERATURE

- 811 — American
- 812 — English
- 821 — German
- 822 — Russian
- 823 — French
- 824 — Spanish & Portuguese
- 826 — Italian
- 827 — Classical*
- 829 — Other Languages*

EDUCATION

- 900 — Foundations: Social, Philosoph.
- 910 — Educational Psychology
- 908 — Elementary Educ., General
- 909 — Secondary Educ., General
- 918 — Higher Education
- 919 — Adult Educ. & Extension Educ.
- 920 — Educ. Meas. & Stat.
- 929 — Curriculum & Instruction
- 930 — Educ. Admin. & Superv.
- 940 — Guid., Couns., & Student Pers.
- 950 — Special Education (Speech, Gifted, Handicapped, etc.)
- 960 — Audio-Visual Media

TEACHING FIELDS

- 970 — Agriculture
- 972 — Art
- 974 — Business
- 976 — English
- 978 — Foreign Languages
- 980 — Home Economics
- 982 — Industrial Arts
- 984 — Mathematics
- 986 — Music
- 988 — Phys. Ed., Health, & Recreation
- 990 — Science Educ.
- 992 — Social Science Educ.
- 994 — Vocational Educ.
- 996 — Other Teaching Fields*
- 998 — Education, General
- 999 — Education, Other*

OTHER PROFESSIONAL FIELDS

- 881 — Theology (see also 833)
- 882 — Business Administration
- 883 — Home Economics
- 884 — Journalism
- 885 — Speech & Hearing Sciences
- 886 — Law, Jurisprudence
- 887 — Social Work
- 891 — Library & Archival Science
- 897 — Professional Field, Other*
- 899 — OTHER FIELDS*

* Identify the specific field in the space provided on the questionnaire.

CODE NUMBERS FOR FIELDS DISPLAYED IN TABLE 2**TOTAL ALL FIELDS**

Physics & Astronomy (101-199)

Chemistry (200-299)

Earth Sciences (301-399)

Physical Sciences Subtotal (101-399)

Mathematics (000-099)

Engineering (400-499)

EMP Total (000-499)

Basic Medical Sciences (540-542, 545-548, 564-566, 572)

Other Biosciences (544, 550-562, 567-571, 578-579)

Biosciences Subtotal (540-579)

Medical Sciences (520-539)

Agricultural Sciences (500-519)

Environmental Sciences (589)

Life Sciences (500-589)

Psychology (600-699)

Economics and Econometrics (720, 725)

Anthropology & Sociology (700, 710)

Political Science, Public Administration, International Relations (750, 755)

Other Social Sciences (708, 725-745, 770-799)

Social Sciences Total (600-799)

Total Sciences (000-799)

History (804-807)

English & American Language & Literature (811, 812)

Foreign Languages & Literature (821-829)

Other Arts & Humanities (801-802, 830-879)

Arts & Humanities Total (801-879)

Professional Fields (881-897)

Education (900-999)

Other or unspecified (899)

Total Non-Sciences (801-999)